

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 23 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 23 limits the system to only three components by the transitional phrase "consisting of". However, the claim uses the transitional phrase "comprising" later in the claim, which introduces ambiguity.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, 7-10, 12-18, 21-23 are rejected under 35 U.S.C. 103(a) as being obvious over Hellmann et al. (US 2003/0105230).

Considering Claims 1, 3, 9-10, 21: Hellmann et al. teaches a modular system comprising: A) at least one base module containing at least one binder, optionally together with organic solvents and B) at least one adhesion module containing at least

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one adhesion-promoting component, optionally together with conventional coating additives, water and/or organic solvents, and E) at least one crosslinking agent module containing at least one crosslinking agent, optionally together with organic solvents (§§0008-14). Component A preferably comprises hydroxyl-functional binders (§§0025). Component B comprises chlorinated polyolefins (§§0045). Component E comprises polyisocyanates (§§0060).

Hellmann et al. teaches the solids content of solutions of chlorinated polyolefins in hydrocarbons (solvent) being 18-60 wt-% (§§0045). While this refers to just the solids content of the chlorinated polyolefin as supplied from the manufacturer, other components of the adhesion module, ie binder and/or solvents, are optional. Therefore, it is within the scope of the teaching to have an adhesion module comprising only the chlorinated polyolefin solution as supplied by the manufacturer.

While the preferred embodiment teaches that the adhesion module B additionally comprises binders, a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art, including nonpreferred embodiments. MPEP 2123. At the time of the invention a person of ordinary skill in the art would have found it obvious to have omitted binder, as an equivalent alternative embodiment of the invention.

With regard to the anhydrous limitation, the modular system of Hellmann may be used for the production of aqueous or solvent-based coating compositions (§§0016). Furthermore, the components may contain either organic solvents or water (§§0009-12).

At the time of the invention a person of ordinary skill in the art would have found it obvious to have omitted water, in order to make a solvent-based coating composition.

Hellmann does not teach the claimed storage stability. However, the reference(s) teaches all of the claimed ingredients. Therefore, the claimed effects and physical properties, i.e. lack of phase separation for at least three months and no irreversible inhomogeneities for at least eight months would implicitly be achieved by a composite with all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure.

Considering Claims 4-5: Hellmann et al. teaches the chlorinated polyolefins having a degree of chlorination of 15-45 wt-% (¶0045).

Considering Claim 7: Hellmann et al. teaches additives being leveling agents, anti-foaming agents, catalysts, dispersing agents, thickeners, and emulsifiers (¶0039).

Considering Claim 8: Hellmann et al. teaches the organic solvents being mono- or polyhydric alcohols and esters (¶0039), both of which are isocyanate-reactive.

Considering Claim 12: Hellmann et al. teaches producing coating compositions by mixing together the individual modules which are stored as finished units (¶0074).

Considering Claim 13: Hellmann et al. teaches coating substrates with the coating composition (¶0075).

Considering Claim 14: Hellmann et al. teaches producing coating compositions by mixing together the individual modules which are stored as finished units (¶0074).

Considering Claim 15: Hellmann et al. teaches the ratio of reactive functional groups of the binders to the complementarily reactive functional groups of the crosslinking agents being 1:2-2:1 (¶0065).

Considering Claim 16: Hellmann et al. teaches module B containing 15% of a 40% chlorinated polyolefin mixture (¶0080). Module B is then mixed with 1:1 module A, followed by a 4:1 ratio of (A + B):E (¶0086). 15% deionised water is then added to the mixture, resulting in a final chlorinated olefin content of 2.04%.

Considering Claim 17: Hellmann et al. teaches the production of coating compositions with good adhesion (¶0007).

Considering Claim 18: Hellmann et al. teaches coating polycarbonate (¶0091).

Considering Claim 22: Hellmann et al. teaches using aromatic hydrocarbons and esters as solvent (¶0040).

Considering Claim 23: Hellmann et al. does not teach that only three components are present. However, Hellmann teaches that the binder module D is preferably combined with the base module A (¶0057), which would not add an extra component. Furthermore, Hellmann teaches that elasticity module C is used when particular elasticity of the coating composition is required, for example when highly flexible plastics are to be coated (¶0054). At the time of the invention a person of ordinary skill in the art would have found it obvious to have omitted elasticity module C when coating substrates that do not require enhanced flexibility, thereby reducing costs. This would result in a three component system.

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Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellmann et al. (US 2003/0105230), as applied to claims 1, 13, and 17 above, and further in view of Merritt et al. (US 6,939,916).

Considering Claims 19-20: Hellmann et al. teaches the basic claimed method as set forth above.

Hellman does not teach the system having a film thickness of up to 10 μm . However, Merritt et al. teaches adhesion promoter coatings based on chlorinated polyolefins (Abs), applied at thicknesses from about 0.01 to about 5.0 mils (0.254-127 μm) (14:25-30). Hellmann and Merritt are analogous art because they are from the same field of endeavor, namely chlorinated polyolefin coatings. At the time of the invention a person of ordinary skill in the art would have found it obvious to have used the thicknesses, as taught by Merritt, in the invention of Hellmann, in order to make an adhesion promoting coating.

Response to Arguments

Applicant's arguments filed 2/2/10 have been fully considered but they are not persuasive.

In response to applicant's arguments regarding the rejection of claims 1, 3-5, 7-10, and 12-23, the arguments have been substantially responded to in the advisory action dated 11/19/09. Furthermore, no evidence has been shown that applicant's "unique combination of three particular components" results in unexpected properties.

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In response to applicant's arguments regarding claim 23, please see the new rejection as set forth above.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NOAH FRANK whose telephone number is (571)270-3667. The examiner can normally be reached on M-F 9-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Marc S. Zimmer/
Primary Examiner, Art Unit 1796

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